performing polar conversion with respect to a periodic signal are input to a low pass filter having: a phase accumulator for outputting smoothed angle data; a phase comparator for obtaining a phase error between the angle data and the smoothed angle data; a first amplifier for amplifying the phase error; a second amplifier for further amplifying the phase error; an integrator for integrating the phase error PE amplified by the second amplifier to obtain a velocity error; and an adder for adding the phase error amplified by the first amplifier and the velocity error to determine a control voltage. The phase accumulator controls the frequency of the smoothed angle data so that the phase error is zero based on the control voltage to remove a high frequency component in the angle data.--

B1 (Contd)

IN THE SPECIFICATION

The paragraph beginning on page 2, line 11 has been amended as follows:

--With a conventional position detection apparatus, it is necessary to provide a low pass filter in order to remove internal noise such as detection noise by means of the head section, quantization noise at the time of A/D conversion, quantization noise at the time of polar conversion or the like. However, when the conventional low pass filter is applied to the angle signal, filtering cannot be performed precisely. For example, if a portion jumping from 360° up to 0° is smoothed, the conventional low pass filter regards the smoothed portion as an angle change from 360° up to 0°, hence,

B2